



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/066,338	01/31/2002	Stephen B. Maguire	40526.10001	9844

7590

04/22/2004

Charles N. Quinn, Esq
FOX, ROTHSCHILD, O'BRIEN & FRANKEL LLP
10th Floor
2000 Market Street
Philadelphia, PA 19103-3231

EXAMINER

SORKIN, DAVID L

ART UNIT

PAPER NUMBER

1723

DATE MAILED: 04/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/066,338

Applicant(s)

MAGUIRE, STEPHEN B.

Examiner

David L. Sorkin

Art Unit

1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-96 is/are pending in the application.
- 4a) Of the above claim(s) 31-48, 53-67 and 83-96 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30, 49-52 and 83-96 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-96 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/12/02 and 10/4/02.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION***Election/Restrictions***

1. Applicant's election with traverse of Invention I in the communication filed 04 February 2004 is acknowledged. Applicant states "in none of the three distinctness situations did the examiner make any reference whatsoever to the patentability prong of the distinctness test". However, MPEP 806.05 (including MPEP 806.05(a)-(i)) sets forth tests for distinctness (including the relative patentability requirement) for particular situations. In all instances the examiner has applied these tests. The examiner maintains that method claims which require "furnishing liquid color" are materially different from a process where another substance is supplied such as water. Likewise, requirement in method claims that color be furnished to "a plastics resin processing machine" is materially different from a process where color is furnished to another machine such as a soda dispenser. Preamble statements of intended use are limiting in process claims, but not apparatus claims. Therefore, for example, apparatus claim 1 could be anticipated by an apparatus intended to deliver water to a soda dispenser, while method claims 31 and 83 are not anticipated by a reference unless it discloses furnishing liquid color to a plastics resin processing machine. The examiner relies upon the reasons for distinctness set forth in the previous office action. After discussing the distinctness requirement, applicant discusses the serious burden requirement. The examiner disagrees with applicant statement on page 24 of the traversal that "Restriction is proper only where an examiner would be unduly burdened by searching numerous, **unrelated** inventions or technologies" (emphasis in original). The MPEP

Art Unit: 1723

806.05 (including MPEP 806.05(a)-(i)) clearly explains that restriction of related inventions may be proper. In this instance, search of 96 claims spanning four entirely separate classification classes, from class 285 (pipe joints or couplings) to class 264 (plastic and nonmetallic article shaping or treating processes), would be monumentally burdensome. It is also noted that the EPO found there to be five distinct groups in a corresponding PCT case, even without claims 68-96, which applicant added after filing in this application.

The requirement is still deemed proper and is therefore made FINAL.

Information Disclosure Statement

2. The information disclosure statement filed 21 March 2003 fails to comply with 37 CFR 1.98(a)(1), which requires a list of all patents, publications, or other information submitted for consideration by the Office. It has been placed in the application file, but the information referred to therein has not been considered.

3. The IDS filed 12 April 2002 and 04 October 2002 have been considered.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 16, 20, 23-30, 49, 50, 51, 52, 75 and 76 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention:

In claim 16, it is unclear what the scope of "moves about an axis" is. While it is understood that this would include rotating about an axis it is unclear what else (such as

Art Unit: 1723

reciprocation) would be included. It appear that more than just rotation is intended because claim 17 recites rotation, but it is unclear what else is intended.

In claim 20 there is lack of antecedent basis for "said mind". Perhaps "mind" should read - - means - -.

In claim 23, from which claims 24-30 depend, there is lack of antecedent basis for "said spring". Perhaps claim 23 should depend from claim 22 rather than claim 2. Likewise there is lack of antecedent basis from several other terms in claims 23-30, such as "said body", "said cavity" and "said diaphragm", all of which would be cured by making claim 23 depend from claim 22.

In claim 49, there is lack of antecedent basis for "said inlet aperture".

In claim 51, there is lack of antecedent basis for "said output shaft of said piston-cylinder combination" (recited in lines 7-8 of the claim). While line 5 of the claim recites "an output shaft *portion*", even the recited portion is not an required element of the piston-cylinder combination, but instead relates to what the piston-cylinder combination is "provided for". The claim must make clear whether the output shaft is a required element of the claimed structure.

In each of claims 75 and 76 there is lack of antecedent basis for "said piston". Perhaps these claims should depend from claims 74 rather than 73.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 1723

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 4, 5, 7, 8, 14, 16, 18-24, 27-29, 68-70, 72-74 and 77-82 are rejected under 35 U.S.C. 102(b) as being anticipated by Siczek (US 3,957,399). Regarding claim 1, Siczek ('399) discloses an apparatus comprising a sealable container (10); a pump (15) within the container, having an inlet (18) proximate the container bottom; and a conduit (17) connected to an outlet of said pump and passing through said container to deliver pumped liquid at the container exterior. Regarding claim 4, while the reference states that the container may contain "paint" (see col. 3, lines 9-10), applicant is advised that "Inclusion of material or article worked upon by a structure being claimed does not impart patentability to the claims" *In re Otto* 136 USPQ 458,459 (CCPA 1963) and "Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim" *Ex parte Thilbault* 164 USPQ 666,667 (Bd. App. 1969). Regarding claim 5, the pump is a diaphragm pump (see title). Regarding claim 7, said pump is mechanically actuated (see col. 2, lines 5-6). Regarding claim 8, the pump is electrically power (see col. 2, lines 59-61). Regarding claim 14, said pump further comprises a body (25,36) having a cavity formed therein; a cover (23) connector to said body; a flexible diaphragm (24) separating said cover from said cavity; said cover having a relief proximate the portion of said diaphragm separating said cover from said cavity, providing space between said cover and said diaphragm (see Fig. 5A); means for cyclically displacing said diaphragm away from said relief area of said cover and into said cavity (see col. 2 line 56 to col. 3 line 59); means for biasing (39) said diaphragm away from said cavity, towards said

Art Unit: 1723

relief area of said cover and into said space during a portion of each cycle of diaphragm displacement. Regarding claim 16, said means for cyclically displacing said diaphragm moves about an axis (see col. 2, lines 65-68). Regarding claim 18, said means for cyclically displacing said diaphragm is a reciprocating means (see col. 2, lines 59-60). Regarding claim 19, said means for cyclically displacing said diaphragm is electrically driven (see col. 2, lines 59-61). Regarding claim 20, said means for cyclically displacing said diaphragm is mechanically driven (see col. 2, lines 5-6). Regarding claim 21, a portion of the reciprocating means (46) contacts said diaphragm. Regarding claim 22 said means for biasing is a spring (39). Regarding claim 23, the spring is a coil spring (see Fig. 2). Regarding claim 24, said body has an inlet passage (upward from 18 as seen in Fig. 2) connecting a pump exterior surface to said cavity, at least a portion of said passageway being substantially vertical, said pump comprising a first freely vertically movable ball (28) residing in said passageway vertical portion, for blocking liquid flow within said passageway and out of said pump. Regarding claim 27, said pump external surface is a bottom surface of said pump body (see Fig. 2). Regarding claim 28, the apparatus further comprises an outlet passageway (from 34 to 19) leading from a vertical extremity of said cavity to the exterior of said pump for conveyance of liquid displaced from said cavity by said diaphragm out of said pump. Regarding claim 29, the apparatus further comprises an outlet passageway (from 34-19) communicating with said cavity adjacent to said diaphragm and leading to the exterior of said pump for conveyance of liquid displaced from said cavity by said diaphragm out of said pump. Regarding claim 68, Siczek ('399) discloses an apparatus comprising a container (10); a

Art Unit: 1723

rod (20 and in the alternative 42,43,46) reciprocably displaceable into said container (see col. 3, lines 12-15); and said container including a valve (28,30) opening to permit liquid flow from said container responsive to reciprocation of said rod. Regarding claim 69, said container is sealable (see col. 3, lines 1-3; Fig. 1). Regarding claim 70, while the reference states that the container may contain "paint" (see col. 3, lines 9-10), applicant is advised that "Inclusion of material or article worked upon by a structure being claimed does not impart patentability to the claims" *In re Otto* 136 USPQ 458,459 (CCPA 1963) and "Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim" *Ex parte Thilbault* 164 USPQ 666,667 (Bd. App. 1969). Regarding claim 72, the rod is mechanically actuated (see col. 2, lines 5-6). Regarding claim 73, said rod is electrically powered (see col. 2, lines 59-61). Regarding claim 74, a piston (20) is for drivingly reciprocating said rod (42,43,46). Regarding claim 77, said rod forms a part of a pump further comprising a body (23,25) within the container, having a cavity; a diaphragm (24) bounding a portion of said cavity; said rod providing means for displacing said diaphragm at least part way into said cavity to displace liquid (see col. 3, lines 16-28); said diaphragm flexing away from said cavity during a portion of a rod reciprocation (see col. 3, lines 16-28). Regarding claim 78, said diaphragm flexes away from said cavity upon retracting movement of said rod relative to said diaphragm and cavity (see col. 3, lines 16-28; col. 5, lines 59-67). Regarding claim 79, said diaphragm resiliently self flexes away from said cavity upon retracting movement of said rod relative to said diaphragm (see col. 3, lines 16-59). Regarding claim 80, said diaphragm

Art Unit: 1723

relaxes upon retracting movement of said rod relating to said cavity (see col. 3, lines 16-59). Regarding claim 81, said diaphragm relaxes upon retracting towards a position from which said rod displaces said diaphragm into said cavity (see col. 3, lines 16-59). Regarding claim 82, the apparatus further comprises means (39) for biasing said diaphragm towards a position from which said rod displaces said diaphragm into said cavity.

8. Claims 1-4, 6, 7, 11, 12, 23, 24, 27, 68-72 and 74-76 are rejected under 35 U.S.C. 102(b) as being anticipated by Miner (US 2,606,696). Miner ('696) discloses an apparatus comprising a sealable container (T); a pump (11) within said container having an inlet (near 29, see Fig. 2) proximate the container bottom; and a conduit (12,12a) connected to an outlet (near 32, see Fig. 2) of said pump and passing through said container to deliver pumped liquid at the exterior of the container. Regarding claim 2, the apparatus further comprises self-sealing means (59,60,61,62,63) connected to said conduit at the exterior of said container for preventing flow of liquid out of said container via said conduit upon disconnection of said apparatus. Regarding claim 3, said self-sealing means is a spring (62) loaded manually actuable quick-disconnect. Regarding claims 4 and 9 applicant is advised that "Inclusion of material or article worked upon by a structure being claimed does not impart patentability to the claims" *In re Otto* 136 USPQ 458,459 (CCPA 1963) and "Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim" *Ex parte Thilbault* 164 USPQ 666,667 (Bd. App. 1969). Regarding claims 6 and 11, the pump is pneumatically actuated (see col. 1, lines 4-6).

Art Unit: 1723

Regarding claims 7 and 12, the pump is mechanically actuated (by rod 18). Regarding claim 23, said spring (62) is a coil spring (see Fig. 7). Regarding claim 24, said body has an inlet passage (28) connecting a pump exterior surface to said cavity, at least a portion of said passage way being substantially vertical (see Fig. 2), and said pump further comprising a first freely vertically movable ball (27) residing in said passageway vertical portion, for blocking liquid flow within said passageway and out of said pump. Regarding claim 27, said pump external surface is a bottom surface of said pump body. Regarding claim 68, Miner ('696) discloses an apparatus comprising a container (T), a rod (18) reciprocally displaceable into said container; and said container including a valve (27) opening to permit liquid flow from the container responsive to reciprocation of said rod. Regarding claim 69, said container is sealable (see Fig. 1). Regarding claim 70, applicant is advised that "Inclusion of material or article worked upon by a structure being claimed does not impart patentability to the claims" *In re Otto* 136 USPQ 458,459 (CCPA 1963) and "Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim" *Ex parte Thilbault* 164 USPQ 666,667 (Bd. App. 1969). Regarding claim 71, said rod is pneumatically actuated (see col. 1, lines 4-6). Regarding claim 72, said rod is mechanically actuate (by piston 16). Regarding claim 74, a piston (16) for drivingly reciprocating said rod. Regarding claim 75, said piston is pneumatically actuated (see col. 1, lines 4-6). Regarding claim 76, said piston would be capable of being hydraulically actuated (see col. 1 line 50 to col. 2 line 22).

Art Unit: 1723

9. Claims 1, 4-6, 14, 15, 22-24 and 27-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Poitras et al. (US 2,665,825). Poitras ('825) discloses an apparatus comprising a sealable container (10); a pump (20) within said container, having an inlet (35) proximate the container bottom; and a conduit (59,60,61) connected to an outlet (23) of the pump and passing through the container to deliver pumped liquid at the container exterior. Regarding claim 4, applicant is advised that "Inclusion of material or article worked upon by a structure being claimed does not impart patentability to the claims" *In re Otto* 136 USPQ 458,459 (CCPA 1963) and "Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim" *Ex parte Thilbault* 164 USPQ 666,667 (Bd. App. 1969). Regarding claim 5, the pump is a diaphragm pump (see col. 2, lines 44-54). Regarding claim 6, said pump is pneumatically actuated (see col. 2, line 26; col. 5, lines 30-35). Regarding claim 14, said pump further comprises a body (21); a cover connected to said body; a flexible diaphragm (33) separating said cover from said cavity, providing space between said cover and said diaphragm (see Fig. 2); means (70) for cyclically displacing said diaphragm away from said relief area of said cover and into said cavity; means (55) for biasing said diaphragm away from said cavity, towards said relief area of said cover and into said space during a portion of each cycle of diaphragm displacement. Regarding claim 15, the means for cyclically displacing is pneumatically driven (see col. 2, line 26; col. 5, lines 30-35). Regarding claim 22, said means for biasing said diaphragm is a spring (55). Regarding claim 23, said spring is a coil spring (see Fig. 2). Regarding

Art Unit: 1723

claim 24, said body has an inlet passageway (see Fig. 2) connecting a pump exterior surface to said cavity, at least a portion of said passageway being substantially vertical (see Fig. 2), and said pump further comprising a first freely vertically movable ball (38) residing in said passageway vertical portion, for blocking downward liquid flow within said passageway an out of said pump. Regarding claim 27, said pump external surface is the bottom of the pump (see Figs. 1 and 2). Regarding claim 28, an outlet passage (23) leads from a vertical extremity of said cavity to the exterior of said pump.

Regarding claim 29, an outlet passage (23) communicates with said cavity adjacent said diaphragm and leads to the exterior of said pump. Regarding claim 30, the outlet passageway has a vertical portion (see Fig. 2) and the pump has a first freely vertically movable ball (45) residing in said outlet passageway vertical portion, for blocking downward liquid flow within said outlet passageway of the pump.

10. Claims 1-16, 18-23, 49, 50, 68-82 are rejected under 35 U.S.C. 102(b) as being anticipated by Conover (US 2,656,828). Regarding claim 1, Conover ('828) discloses an apparatus comprising a sealable container (30), a pump (see col. 3, lines 44-59), having an inlet (55,56) proximate the container bottom; and a conduit (34,63) connected to an outlet (50) of said pump and passing through said container to deliver pumped liquid at the container exterior. Regarding claim 2, the apparatus further comprises self-sealing means connected to said conduit at the exterior of said container for preventing flow of liquid out of said container via said conduit upon disconnection of said apparatus (see col. 5 line 48 to col. 6 line 41; Figs. 8 and 10). Regarding claim 3, said self-sealing means is a spring loaded manually actuable quick-disconnect (see col. 5, line 48 to col.

6 line 41; Figs. 8 and 10). Regarding claims 4 and 9, applicant is advised that "Inclusion of material or article worked upon by a structure being claimed does not impart patentability to the claims" *In re Otto* 136 USPQ 458,459 (CCPA 1963) and "Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim" *Ex parte Thilbault* 164 USPQ 666,667 (Bd. App. 1969). Regarding claims 5 and 10, the pump is a diaphragm pump (see col. 3, lines 44-59). Regarding claims 6-8 and 11-13, these claims discuss the manner in which the pump is intended to be operated. Applicant is advised that "the manner or method in which such machine is to be utilized is not germane to the issue of patentability of the machine itself" *In re Casey* 152 USPQ 235 (CCPA 1967). In this instant the reference discloses the act of actuating the pump by manually depressing the piston shaped handle (58); however part 58 would be capable of being depressed by other sources of force. Regarding claim 14, the pump further comprises a body (46) having a cavity formed therein; a cover (45) connected to the body; a flexible diaphragm (47) separating said cover from said cavity, providing space between said cover and said diaphragm; means (58,57) for cyclically displacing said diaphragm away from said relief area of said cover and into said cavity; means (59) for biasing said diaphragm toward said relief area of said cover and into said space during a portion of each cycle of diaphragm displacement. Regarding claim 15, as explained above with regard to claims 6 and 11, the means (58,57) would be capable of being pneumatically driven. Regarding claims 16 and 18, said means (58,57) is a reciprocating means (see col. 3 line 60 to col. 4 line 23). Regarding claims 19 and 20,

Art Unit: 1723

as explained above regarding claims 7, 8, 12 and 13, the means (58,57) could be driven mechanically or electrically. Regarding claim 21, the reciprocating means (58,57) contacts the diaphragm (see Fig. 3). Regarding claim 22, said means for biasing is a spring (59). Regarding claim 23, the spring is a coil spring (see Fig. 3). Note: means for pumping of claim 49 and pumping means of claim 51 are not considered to invoke section 112 sixth paragraph because the three-prong test set forth in MPEP 2181 (page 2100-214 of the Feb. 2003 edition), specifically "the phrase 'means for' or 'step for' must not be modified by sufficient structure, material or acts for achieving the specified function". Regarding claim 49, Conover ('828) discloses a container (30) having a quick disconnect fitting for output of liquid (see col. 5, line 48 to col. 6 line 41; Figs. 8 and 10); means within said container, for pumping liquid out of said container responsive to pressurized gas furnished thereto (see col. 2 line 54 to col. 3 line 6) comprising an upper portion (45); a body portion (46) connected to said upper portion, having an open interior cavity facing said upper portion, a liquid inlet facing communicating with said open interior cavity and an outlet also communicating with said inlet (see Fig. 3); a check valve (53) within said inlet for permitting inflow of liquid from within said container into said open interior cavity but blocking outflow from said open interior cavity into said container; a diaphragm (47) between said upper portion and said open interior of said body, edges of said diaphragm being sandwiched between said upper portion and said body, being distendable towards and into said open interior cavity of said body responsively to application of force to a diaphragm side facing oppositely from said open interior cavity to displace liquid having entered said open interior cavity to displace

Art Unit: 1723

liquid having entered said open interior of said body through said inlet orifice from said body through said outlet and out of said container via an outlet connection by urging a diaphragm surface facing said open interior cavity of said body against liquid present therein (see col. 3, line 44 to col. 4 line 23); and a spring (59) for biasing said diaphragm away from said open interior. Regarding claim 50, applicant is advised that "Inclusion of material or article worked upon by a structure being claimed does not impart patentability to the claims" *In re Otto supra*. and "Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim" *Ex parte Thilbault supra*. Regarding claim 68, Conover ('828) discloses an apparatus comprising a container (30), a rod (57) reciprocably displaceable into said container; and said container including a valve (53) opening to permit liquid color flow from said container responsively to reciprocation of said rod. Regarding claim 69, said container is sealable (see col. 2, line 54). Regarding claim 70, applicant is advised that "Inclusion of material or article worked upon by a structure being claimed does not impart patentability to the claims" *In re Otto supra*. and "Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim" *Ex parte Thilbault supra*. Regarding claim 71-73, 75 and 76 as explained above regarding claims 6-8, the rod and piston would be capable of being pneumatically, hydraulically, electrically, or mechanically actuated. Regarding claim 74, a piston (58) is for drivingly reciprocating said rod. Regarding claim 77, said rod forms part of a pump further comprising a body (46) having a cavity formed therein; a diaphragm (47) bounding a

Art Unit: 1723

portion of said cavity; said rod providing means for displacing said diaphragm at least part way into said cavity to displace liquid therefrom; said diaphragm flexing away from said cavity during a portion of a rod reciprocation (see Fig. 3; col. 3, line 44 to col. 4 line 23). Regarding claim 78, said diaphragm flexes away from said cavity upon retracting movement of said rod relative to said diaphragm and said cavity (see Fig. 3; col. 3, line 44 to col. 4 line 23). Regarding claim 79, said diaphragm resiliently self-flexes away from said cavity upon retracting movement of said rod relative to said diaphragm (see col. 3, line 44 to col. 4 line 23). Regarding claim 80, said diaphragm relaxes upon retracting movement of said rod relating to said cavity (see col. 3, line 44 to col. 4 line 23). Regarding claim 81, said diaphragm relaxes upon retracting movement of said rod away from said diaphragm (see col. 3, line 44 to col. 4 line 23). Regarding claim 82, means (59) biases said diaphragm towards a position from which said rod displaces said diaphragm into said cavity (see col. 3, line 44 to col. 4 line 23).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Poitras et al. (US 2,665,825) in view of Hampton (US 1,489,348). The apparatus of Poitras ('825) was discussed above with regard to claim 14. In Poitras ('825), the means for cyclically displacing is a pneumatic pressure generating device (70), rather

Art Unit: 1723

than means meeting the limitations of claim 16-19. Hampton ('348) teaches means for cyclically displacing a diaphragm of a pump which move rotatably about an axis (see rotatable cams 112, 149, 168), which may be electrically driven (see page 10 line 79-80), and which includes a reciprocating member (111 in the embodiment of Fig. 4, 106 in Fig. 6). It is considered that it would have been obvious to one of ordinary skill in the art to have provided that apparatus of Poitras ('825) with the electrically driven, rotatable cam/ reciprocating plunger means of Hampton ('348) because Hampton ('348) explicitly presents such means as an alternative to pneumatic pressure displacement in diaphragm pumps (see page 10 lines 34-88).

13. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siczek ('399) in view of Hampton (US 1,489,348). The apparatus of Siczek ('399) was discussed above with regard to claim 14. Siczek ('399) discloses a "reciprocating electric motor" in col. 2, lines 59-68, but does not detail its construction. Hampton ('348) teaches means for cyclically displacing a diaphragm of a pump which move rotatably about an axis (see rotatable cams 112, 149, 168), which may be electrically driven (see page 10 line 79-80), and which includes a reciprocating member (111 in the embodiment of Fig. 4, 106 in Fig. 6). It is considered that it would have been obvious to one of ordinary skill in the art to have provided that apparatus of Siczek ('399) with the electrically driven, rotatable cam/ reciprocating plunger means of Hampton ('348) because Hampton ('348) provides a more detailed description consistent with the type of motor Siczek ('399) suggest, for the same purpose (reciprocating a diaphragm of a

diaphragm pump). The word "revolutions" in Hampton ('348) would have also suggested means rotating about an axis.

14. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Conover ('828) in view of Hampton (US 1,489,348). The apparatus of Conover ('828) was discussed above with regard to claim 14. Conover ('828) does not disclose rotatable means for cyclically displacing. Hampton ('348) teaches means for cyclically displacing a diaphragm of a pump which move rotatably about an axis (see rotatable cams 112, 149, 168) and which includes a reciprocating member (111 in the embodiment of Fig. 4, 106 in Fig. 6). It is considered that it would have been obvious to one of ordinary skill in the art to have provided that apparatus of Conover ('828) with the rotatable cam/reciprocating plunger means of Hampton ('348) because Hampton ('348) explicitly presents such means as an alternative other manners in which to cause displacement of a diaphragm of a pump (see page 10 lines 34-88).

15. Claims 51 and 52 rejected under 35 U.S.C. 103(a) as being unpatentable over Conover (US 2,656,828) in view of Miner (US 2,606,696). Regarding claim 51, Conover ('828) discloses an apparatus comprising a container (30) having an outlet connection (see col. 5 line 47 to col. 6 line 41; Figs. 8 and 10); a reciprocable rod (57) within said container; diaphragm pump means housed at least partially within said container, for pumping liquid out of said container via said outlet connection comprising an upper housing part (45) having a relief with an aperture therein (see Fig. 3; col. 3 line 44 to col. 4 line 23); a body (46) connected to said upper housing part and having an open interior cavity facing said relief of said upper housing part, said body having a liquid inlet

Art Unit: 1723

aperture communicating with said open interior cavity an outlet aperture communicating with said open interior remotely from said inlet aperture (see Fig. 3; col. 3 line 44 to col. 4 line 23); a check valve (53) at said inlet aperture for permitting inflow of liquid from within said container into said open interior cavity but blocking efflux of said liquid outwardly from said open interior cavity through said inlet aperture; a diaphragm (47) between said upper housing part and said open interior cavity of said body, being distendable towards and into said open interior cavity of said body responsively to axial reciprocating movement of said rod through said aperture in said relief of said upper housing part to serially displace liquid in said open interior cavity from said body through said outlet orifice and out of said container via said outlet connection (see Fig. 3; col. 3 line 44 to col. 4 line 23); and a spring (59) for biasing said diaphragm away from said open interior portion of said body and into space proximate said relief. The rod (57) of Conover ('828) is connected to piston (58), which is intended to be manually actuated. The claimed "pneumatic piston-cylinder combination" is not disclosed by Conover ('828). Miner ('696) taught a pneumatic piston-cylinder combination (14,16) removably connected to a container (T), for providing pneumatically driven reciprocation of an output shaft portion (a portion of 18) thereof. It is considered that it would have been obvious to one of ordinary skill in the art to have provided the apparatus of Conover ('828) with the pneumatic piston-cylinder combination of Miner ('696), because Miner ('696) explains that the purpose of this aspect of his invention is to automate hand operated pumps (see col. 3, lines 18-20), while the pump of Conover ('828) is hand operated. Regarding claim 52, applicant is advised that "Inclusion of material or article

Art Unit: 1723

worked upon by a structure being claimed does not impart patentability to the claims" *In re Otto supra.* and "Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim" *Ex parte Thilbault supra.*

Allowable Subject Matter

16. Claims 25 and 26 would be allowable if rewritten to overcome the corresponding rejection under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim (claim 1) and claims 14, 22, 23 and 24.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David L. Sorkin whose telephone number is 571-272-1148. The examiner can normally be reached on 9:00 -5:30 Mon.-Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L. Walker can be reached on 571-272-1151. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1723

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David L. Sorkin
Examiner
Art Unit 1723

David Sorkin